

IN THE CLAIMS:

1. (Currently Amended) A peak detector for detecting a peak value of a burst signal in a burst mode optical receiver, the peak detector comprising:

an amplifying terminal configured to reduce an offset of a peak value in a received burst signal using feedback in the peak detector;

a transistor that functions as a diode when a positive signal is received from the amplifying terminal;

a peak hold capacitor for charging a peak value and maintaining a peak level when the transistor received the positive signal;

a signal amplitude detector to monitor the received burst signal amplitude and generates a control signal corresponding to the signal amplitude; and

a current source to drive a current responsive to the output signal amplitude detector.

2. (Original) The peak detector for detecting a peak value of a burst signal in a burst mode optical receiver as claimed in claim 1, wherein the transistor is a Heterojunction Bipolar Transistor (HBT).

3. (Cancelled)

4. (Original) The peak detector for detecting a peak value of a burst signal in a burst mode optical receiver as claimed in claim 3, wherein the current source is responsive to the control signal.

5. (Original) The peak detector for detecting a peak value of a burst signal in a burst mode optical receiver as claimed in claim 1, wherein when a negative signal is received in the transistor, the peak hold capacitor discharges.

6. (Original) The peak detector for detecting a peak value of a burst signal in a burst mode optical receiver as claimed in claim 1, wherein the signal amplitude detector includes a differential amplifier.

7. (Original) The peak detector for detecting a peak value of a burst signal in a burst mode optical receiver as claimed in claim 1, wherein the current source is a MOS FET.

8. (Currently Amended) A bottom detector for detecting a bottom value of a burst signal in a burst mode optical receiver, the bottom detector comprising:

an amplifying terminal configured to reduce an offset of a bottom value in a received burst signal using feedback in the bottom detector;

a diode that is turned on when a negative signal is received from the amplifying terminal;
a peak hold capacitor connected to the diode and a voltage source, wherein the peak hold capacitor charges a bottom value when the diode is turned on and maintains the bottom level;

a signal amplitude detector to monitor the received burst signal amplitude and generates a control signal corresponding to the signal amplitude; and

a current source connected in parallel to the peak hold capacitor to drive a current responsive to an output of the signal amplitude detector.

9. (Cancelled)

10. (Original) The bottom detector for detecting a bottom value of a burst signal in a burst mode optical receiver as claimed in claim 9, wherein the current source is responsive to the control signal.

11. (Original) The bottom detector for detecting a bottom value of a burst signal in a burst mode optical receiver as claimed in claim 8, wherein the signal amplitude detector includes a differential amplifier.

12. (Original) The bottom detector for detecting a bottom value of a burst signal in a burst mode optical receiver as claimed in claim 8, wherein the current source is a MOS FET.